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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,113	06/26/2003	James Joseph Fisher	038819.52556US	3703
23911	7590	08/09/2004	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			A, MINH D	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/606,113	Applicant(s) FISHER ET AL.	
	Examiner Minh D A	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/05/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 15-16 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in dependent form.
2. Claims 1-13 and 15-16 are objected to because of the following informalities:
Regarding claim 14 is missing, should be renumber for each claim (1-13 and 15-16). Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being unpatentable by Gibson et al (EP 0 349 069 A1).

Regarding claim 1, Gibson discloses a dual polarized phased array antenna comprising at least first and second substantially planar Vivadi antenna elements (17) having active portions for radiating signals from a direction forward of the antenna (17), the antenna elements (17) having mutually intersecting planes and having phase centers (16) of the active portions substantially co-located, and respective antenna element feeds (20) coupled to respective antenna elements (17) at a position to the

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rear of the active portions and displaced from an axis extending through the phase centers (16) and the intersection of the planes of the antennas(17). See figures 1-4, col.1, lines 39-57 to col.6, lines 1-42.

Regarding claim 2, Gibson discloses wherein the antenna element (17) includes an antenna feedline (20) connected to the antenna element feeds at the position displaced from the axis. See figures 3-4.

Regarding claim 3, Gibson discloses wherein the antenna feedline crosses the axis. See figures 3-4.

Regarding claim 5, Gibson discloses wherein the element comprises a feed flare and an end flare. See figures 2-4.

Regarding claim 6, Gibson discloses wherein the element includes a substantially constant slot section disposed between the feed flare and the end flare. See figures 2-4.

Regarding claim 7, Gibson discloses the feedline includes a parallel section substantially parallel to the axis. See figures 2-4.

Regarding claim 8, Gibson discloses wherein the parallel section of the first element has substantially the same length as the constant slot section of the other element. See figures 3a-4.

Regarding claim 9, Gibson discloses wherein the locus of effective phase centers (16) of the elements are co-located. See figures 2-4.

Regarding claim 10, Gibson discloses wherein the antenna elements (17) are joined by mutually engaging formations. See figures 2-4.

Regarding claim 11, Gibson discloses wherein the mutually engaging formations include slots (14) made in the elements. See figures 2-4.

Regarding claim 12, Gibson discloses wherein the elements (17) are formed by Substrates (print circuit board) and metallised layers (15). See figures 2-4.

Regarding claim 13, Gibson discloses wherein the first and the second elements (17) have substantially matching end flares. See figures 2-4.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Gibson et al (EP 0 349 069 A1).

Regarding claim 4, Gibson discloses the claimed invention except for twin-line section. It would have been an obvious matter of design choice to employ twin-line section, since applicant has not disclosed that the twin-line section solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with twin-line section .

Regarding claims 15-16, Gibson discloses the claimed invention except for radiowave receiving and transmitting apparatus. It would have been an obvious to one having ordinary skill in the art at the time the invention was made to employ radiowave

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receiving and transmitting apparatus since the examiner takes Office Notice of the equivalence of a circuit board and reception of electromagnetic energy on col.3, lines 20-58 to col.4, lines 1-23 for their use in the radiowave receiving and transmitting apparatus art and the selection of any of these known equivalents to circuit board and reception of electromagnetic energy would be within the level of ordinary skill in the art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Huynh et al (US 5,896,107) and Johannisson et al. (US 6,531,984) are cited to show an antenna.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.


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Examiner

Minh A

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8/5/04


Don Wong
Supervisory Patent Examiner
Technology Center 2800